Minutes of the LCLS BLM Simulations Working Group
March 5, 2008
Attendees/Argonne: J. Dooling, B. Yang; /SLAC: A. Fasso, H.-D. Nuhn, M. Santana

Reviewed 1st radiator electron spectrum from MARS. Regarding the FLUKA spectra MS sent showing the number of photons versus energy and wavelength, for a single electron. Is this a single electron or beam of electrons? AF said this is not a physical result and that the code needs to have a function describing the variation in the refractive index with wavelength or energy. Other optical properties such as reflectivity, diffusion coefficients, and absorption as functions of wavelength are also required.

Coupling coefficients are generated by FLUKA (presumably also a function of wavelength). MS requested information regarding the physical and optical properties of the radiator material.

JD requested clarification regarding the geometry of collimators between the OTR flag (OTR33) and the LCLS undulators. Will review the SYMBOLS file.

BXY discussed the necessity of using Pb (tape) to shield the radiator from x-rays.

AF and MS suggested that we could arrange a videoconference with Alfredo Ferrari at INF who authored the optics portion of the FLUKA code.

(In a subsequent e-mail MS mentioned that Ferrari believes diffusion in quartz is non-negligible for our application).

The next meeting of the WG is scheduled for March 12, 2008, 4:30 PM CDT. JD has requested that we change the meeting time; will discuss at the next meeting.

JCD